WHAT IS CLAIMED IS:

1. A nanocomposite optical plastic article, comprising:

a plastic host material having a temperature sensitive optical vector x;

a core shell nanoparticulate material dispersed into said plastic host material, said core shell nanoparticulate material having a core defined by a nanoparticulate material having a temperature sensitive optical vector x_1, a shell defined by a coating material layer coated onto said core, said shell having a temperature sensitive optical vector x_2 and wherein said temperature sensitive optical vector x_1 is directionally opposed to said temperature sensitive optical vector x of said plastic host material.

2. The method recited in claim 1, wherein the steps of providing a nanoparticulate material and coating said nanoparticulate material further include the step of selecting said nanoparticulate material and coating material layer such that said temperature sensitive optical vector x is defined as an index of refraction $n_{plastic\ host}$, said temperature sensitive optical vector x_1 is defined as an index of refraction n_{core}, and wherein said temperature sensitive optical vector x_2 is defined as an index of refraction n_{shell}, wherein $n_{shell} < n_{plastic\ host} < n_{core}$.

3. The method recited in claim 1 wherein said step of dispersing further includes evenly dispersing said core shell nanoparticulate material throughout said polymethylmethacrylate host material.

4. The method recited in claim 1 wherein said step of coating said nanoparticulate material further includes the step of requiring said temperature sensitive optical vector x2 of said coating material layer to be directionally opposed to said temperature sensitive optical vector x of said polymethylmethacrylate host material.

5. The method recited in claim 1 wherein said step of providing a nanoparticulate material further comprises the step of selecting a nanoparticulate material from the group consisting of: silica nanoparticles, magnesium oxide nanoparticles, zinc sulfide nanoparticles, zinc selenide, and cadmium sulfide.

6. The method recited in claim 5 wherein said step of selecting a nanoparticulate material further comprises selecting a nanoparticulate material having a particle size of about 15nm.

7. The method recited in claim 5 wherein said step of selecting a nanoparticulate material includes the step of selecting a nanoparticulate material having a particle size less than about 50nm.

8. The method recited in claim 5 wherein said step of selecting a nanoparticulate material includes the step of selecting a nanoparticulate material having a particle size less than about 20 nm.

9. The method recited in claim 1 wherein said step of coating said nanoparticulate material comprises the step of selecting a coating layer from materials comprising any non-absorbing, low refractive index material.

10. The method recited in claim 9 wherein said step of selecting a coating layer further includes the step of selecting a material from the group consisting of: amorphous silica, fluropolymer, magnesium fluoride, and silsequinoxane materials.

11. The method recited in claim 1 wherein said step of coating said nanoparticulate material comprises the step of selecting a coating material layer comprising a silica coating layer.

12. The method recited in claim 11 wherein said step of selecting a coating material layer further comprises the step of applying said coating material layer onto said nanoparticulate material to a thickness in the range of about 5nm to about 17nm.

13. The method recited in claim 1 wherein said step of coating said nanoparticulate material comprises the step of selecting a coating material layer comprising a magnesium fluoride coating layer.

14. The method recited in claim 1 wherein said step of providing a nanoparticulate material further comprises the step of selecting a nanoparticulate material from the group consisting of: potassium titano phosphate, aluminum oxide, magnesium aluminate, yttrium oxide, and calcium carbonate.

15. The method recited in claim 1 wherein the step of dispersing includes the step of compounding.

16. The method recited in claim 1 wherein the step of dispersing includes the steps of:

(a) dissolving said polymethylmethacrylate host material into a solvent and dispersing said core shell nanoparticulate material into a solvent to form solvent mixtures;

(b) mixing together said solvent mixtures to form a combined solvent mixture;

(c) removing the solvent from said combined solvent mixture leaving an optically modified material; and,

(d) pelletizing said optically modified material.